

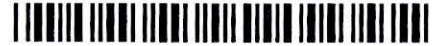


Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

PRELIMINARY ISSUE

650.6515
Job Sheet 211491



Part No: 650.6515

Job Qty: 2 pcs

Part Name: Extended Gauge Adapter



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/17/20

Job Tracking No:

Due Date: 7/31/20

Created By: Jennifer Renwick

Type: SOLD

Description:

Note: 650.6500 REV.PB2 IPP REV:A 20.06.25 NEW ISSUE DD VERF:JFS

Ship Via:

139 Valve

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter / Supplier Lead Time	Sign-off
					Setup Hrs	Run Hrs		
100	SL-154 - 1	2 pcs	7/31/20		1.00	0.67	Doosan - 1	
							NLX 2500SY - 1	
							SL-154 - 1	
							SL-2500Y - 1	
110	QC 2	2 pcs	7/31/20		0.00	0.00	QC 2 - 1	
							QC 2 - 12	
							QC 2 - 14	
							QC 2 - 17	
							QC 2 - 19	
							QC 2 - 2	
							QC 2 - 20	
							QC 2 - 22	
							QC 2 - 23	
							QC 2 - 25	
							QC 2 - 32	
							QC 2 - 33	
							QC 2 - 35	
							QC 2 - 39	
							QC 2 - 4	
							QC 2 - 40	
							QC 2 - 44	
							QC 2 - 45	
							QC 2 - 48	
							QC 2 - 49	
							QC 2 - 50	
							QC 2 - 51	
							QC 2 - 52	
							QC 2 - 57	
							QC 2 - 62	
							QC 2 - 63	
							QC 2 - 8	



Container No: S290382



Part: 650.6515

Job No: 211491

Serial No/Batch: S290382

Revision: REV.PB2

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 07/27/20

Plex 7/17/20 1:14 PM Dart.Renwick.Jennifer

DAS
62
9-89

DAS
62
9-89

					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
					QC 2 - 76	
					QC 2 - 86	
					QC 2 - 83	
120	QC 8	2 pcs	7/31/20	0.00 0.00	QC 8 - 12	
					QC 8 - 14	on 20/07/28
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
					QC 8 - 76	
					QC 8 - 61	
					QC 8 - 66	
					QC 8 - 73	
					QC 8 - 82	
130	Outsource - 17 - Passivate	2 pcs	7/31/20	0.00 0.00	600002	2020-07-29
140	Packaging 2-1 - Receive - B4B	2 pcs	7/31/20	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	the AUG 06 2020
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	

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				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 37 - B4B	
150	QC 6	2 pcs	7/31/20	0.00 0.00	QC 6 - 9
					QC 6 - 68
					QC 6 - 61
					QC 6 - 40
					QC 6 - 81
					QC 6 - 82
					DAS 82 9-89
					AUG 17 2020
160	Packaging 3-1 - Stock - B4B	2 pcs	7/31/20	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 37 - B4B
					DAS 82 9-89
					AUG 17 2020
170	QC 21 - SA	2 pcs	7/31/20	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
					QC 21 - SA - 9
					DAS 21 9-89
					AUG 18 2020

Part Op 100 - ****CRITICAL PART - EXTREME CARE MUST BE TAKEN**** **USE PORT TOOL** 1-Machine as per folio
 Descriptions: FOLIO REV: AA DWG REV: PB2 2-Deburr

110 - QC2- Inspect parts off machine FAI/FAIB

120 - QC8- Inspect parts - second check

130 - Issue P/O; 46807 PASSIVATE IAW QQ-P-35C, TYPE II -Material type; 303 stainless steel -Certificate of Conformity is required

140 - Certificate of Conformity is required

150 - QC6- All purchased or subcontracted products

160 - Identify as per dwg & Stock ****CRITICAL PART - EXTREME CARE MUST BE TAKEN**** **MUST ENSURE THE COMPONENTS ARE NEVER DAMAGE****

170 - QC21- Final Inspection - Work Order Release

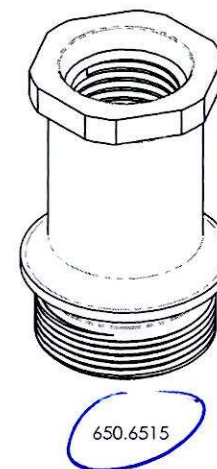
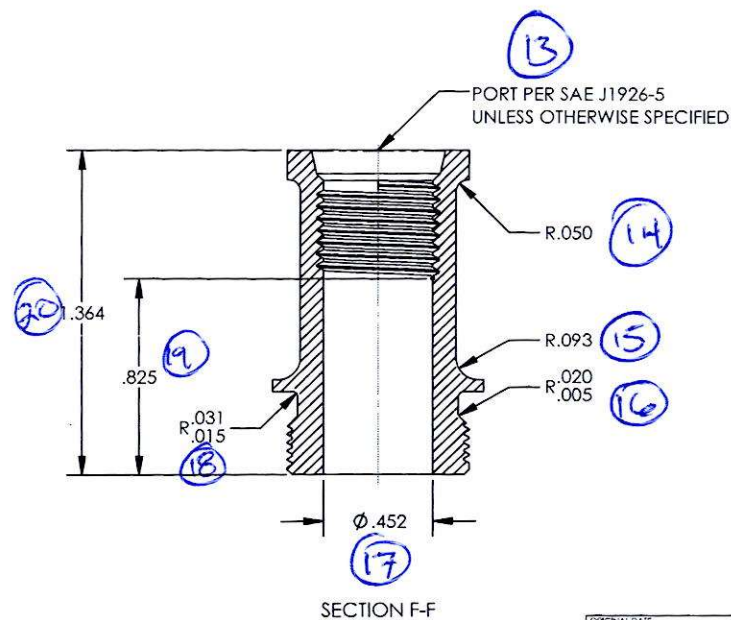
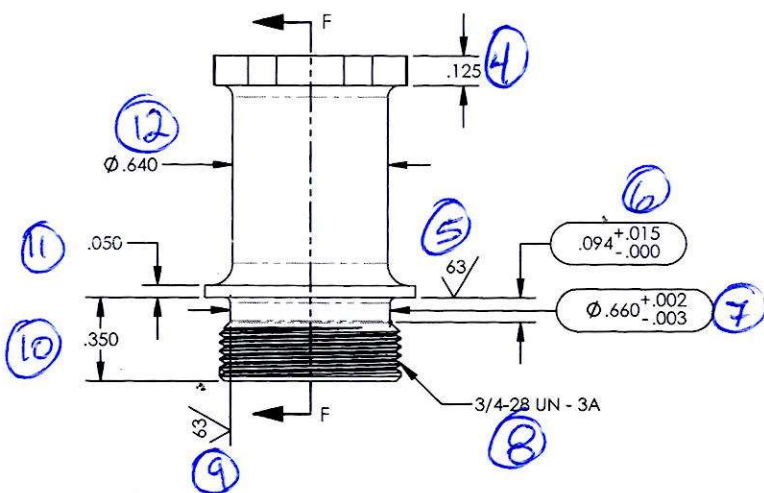
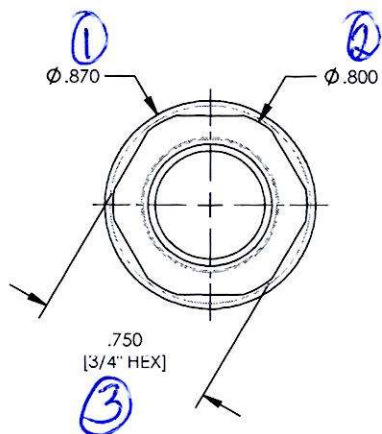
Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M303R1.000	303 Round Bar 1.00	.2520 ft (.126 ea)	100-SL-154 - 1	S250215

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-SL-154 - 1	M303R1.000	0	43	0
Part Specifications				
Specifications could not be found.				

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THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE (M/D/Y) 06/29/2014 DRAWN BY: CHECKER H. CAP F. BRAVO DRAWING APPROVAL: P. BRAVO 06/29/14 CONTRACT NO.		3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 774-5530 APICAL INDUSTRIES, INC. 400 EAST AEROSPACE													
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1. SPACES 0.005 2. PLACES DECIMALS 0.005 3. ANGLES 1/16		PORT ADAPTERS <table border="1" style="width: 100%;"> <thead> <tr> <th>SUB</th> <th>CAGE CODE</th> <th>DWG NO.</th> <th>REV</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>07MA26</td> <td>650.6500</td> <td>PB2</td> </tr> <tr> <td colspan="2">SCALE: NONE</td> <td colspan="2">SHEET 4 OF 6</td> </tr> </tbody> </table>		SUB	CAGE CODE	DWG NO.	REV	0	07MA26	650.6500	PB2	SCALE: NONE		SHEET 4 OF 6	
SUB	CAGE CODE	DWG NO.	REV												
0	07MA26	650.6500	PB2												
SCALE: NONE		SHEET 4 OF 6													

DART AEROSPACE LTD

Work Order:	211491
Part Number:	650.6515
Page 1 of 1	

Description:	PORT ADAPTER EXTENDED GAUGE ADAPTER
Inspection Dwg: 650.6500	Rev: PB2

INSPECTION SHEET

	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1	Ø .870	± .005	.870 ¹	✓		Mic	JB-09
2	Ø .800	± .005	.800 ¹	✓		Mic	JB-09
3	.750	± .005	.750 ⁰	✓		Mic	JB-09
4	.125	± .005	.1248	✓		Optical comp.	
5	√63	-		✓		can't measure too small surface	
6	.094	+ .015 / - .000	.1014	✓		optical comp.	
7	Ø .660	+ .002 / - .003	.6598	✓		Blade Mic	16-insp 6
8	¾ - 28 UN - 3A	M.O.W.	¾ - 28 UN 3A	✓		M.O.W.	.024
	MAJOR Ø	.7500 / .7435	.746 ⁶	✓		mic	JB-09
	M.O.W. (.024)	.7679 / .7650	.766 ³	✓		mic	JB-09
9	√63	-	6.5 Min	✓		SJ-400	300/30805 (mach 01)
10	.350	± .005	.350 ³	✓		optical comp.	
11	.050	± .005	.051 ²	✓		optical comp.	
12	Ø .640	± .005	.639 ⁹	✓		mic	JB-09
13	PORT SAE J1926-5	-	Port J1926-5	✓			
	Ø .550	+ .005 / - .000	.551 ⁵	✓		Vernier	JB-01
	.093 DEEP	+ .015 / - .000	.105	✓		Vernier	JB-01
	1/2 - 20 THREAD	GO / NO-GO	1/2 - 20 UNF 2A	✓		GO / NO-GO	1/2 - 20 UNF 2A
14	R .050	± .005	R .050	✓		RG 1/16	(Ref)
15	R .093	± .005	R .093	✓		RG 3/32	(Ref)
16	R .005	+ .015 / - .000	R .012 ⁵	✓		RG 1/64	(Ref)
17	Ø .452	± .005	.453 ⁵	✓		Vernier	JB-01
18	R .015	+ .016 / - .000	R .022 ⁵	✓		RG 1/32	(Ref)
19	.825	± .005	.824 ⁵	✓		Vernier	JB-01
20	1.364	± .005	1.364 ⁶	✓		Mic	JB-03
21	303 SS AMS 5640			✓		MILLTEST	H/C432071
22	PASSIVATED			✓		COFC ALTECH	
		DAS 62				POMBO16807	DAS 82 9-89

Measured by: JB	9-89	Checked by: JML	QC Inspector:
Date: 20.07.27		Date: 20/07/28	Date: SEP 15 2020

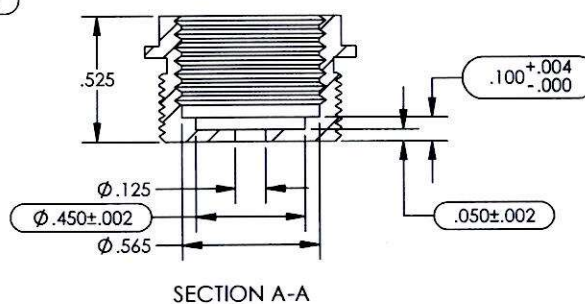
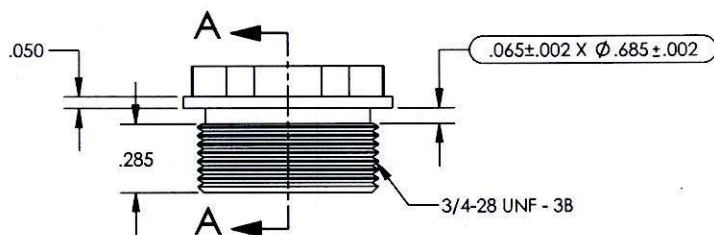
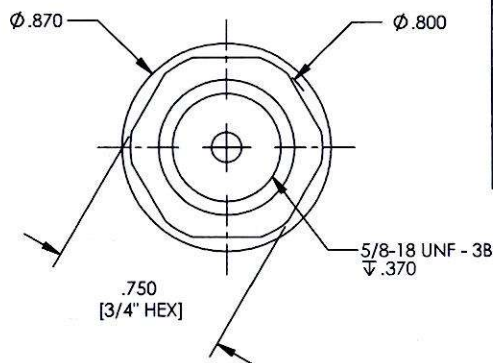
Engineering Approval: (If necessary)	Date:
--------------------------------------	-------

Rev	Date	Change	Revised by	Approved
A	27-Jul-20	New Issue	MG	

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NOTES:

- 1 MATERIAL: STAINLESS STEEL 303 1AW AMS-5640 (21)
2. DEBURR AND BREAK ALL SHARP EDGES
3. IDENTIFY 1AW MPP-120
- 4 FINISH: 1AW MPP-172 PASSIVATE 1AW SECTION 6. (22)



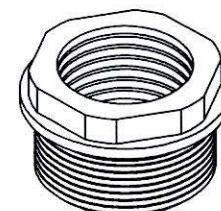
SECTION A-A

PROTOTYPE REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
A1-1 B3-2 B4-2 B6-2 B7-2 C1-2	PB1	REMOVED ELECTROPOLISH FINISH ADDED SURFACE ROUGHNESS VALUE DIMENSION WAS .065±.002 IS .094±.015/- .000 ADDED SURFACE ROUGHNESS VALUE DIMENSION WAS .065±.002 IS .094±.015/- .000 ADDED .350 DIMENSION ADDED SURFACE ROUGHNESS VALUE THREAD CALLOUT WAS 3/4-28 UNF - 3B IS 3/4-28 UN - 3A ADDED SAE J1926-6 PORT CALLOUT DIMENSION WAS Ø.685±.002 IS Ø.660±.002/- .003 ADDED .350 DIMENSION ADDED SURFACE ROUGHNESS VALUE THREAD CALLOUT WAS 3/4-28 UNF - 3B IS 3/4-28 UN - 3A DIMENSION WAS Ø.685±.002 IS Ø.660±.002/- .003 ADDED SAE J1926-5 PORT CALLOUT ADDED .350 DIMENSION ADDED SURFACE ROUGHNESS VALUE DIMENSION WAS .065±.002 IS .094±.015/- .000 DIMENSION WAS Ø.685±.002 IS Ø.660±.002/- .003 ADDED R.015-.031 DIMENSION ADDED R.005-.020 DIMENSION ADDED R.015-.031 DIMENSION ADDED R.005-.020 DIMENSION ADDED R.015-.031 DIMENSION ADDED R.005-.020 DIMENSION ADDED SAE J1926-5 PORT CALLOUT ADDED .350 DIMENSION ADDED SURFACE ROUGHNESS VALUE DIMENSION WAS .065±.002 IS .094±.015/- .000 DIMENSION WAS Ø.685±.002 IS Ø.660±.002/- .003 ADDED R.015-.031 DIMENSION ADDED R.005-.020 DIMENSION ADDED Ø.452 DIMENSION	06/01/2020	T. CROSS
C3-2				
C4-2				
C5-2				
C7-2				
D1-2				
D3-2				
D5-2				
D7-2				
A3-4				
B7-4				
C1-4				
C3-4				
C4-4				
C5-4				
C7-4				
D6-4				
C1-3 B3-3 B4-3 C3-3 C4-3 D1-3 D3-3	PB2	ADDED SURFACE ROUGHNESS VALUE ADDED SURFACE ROUGHNESS VALUE DIMENSION WAS .065±.002 IS .094±.015/- .000 ADDED SAE J1926-4 PORT CALLOUT DIMENSION WAS Ø.685±.002 IS Ø.660±.002/- .003 ADDED R.015-.031 DIMENSION ADDED R.005-.020 DIMENSION	06/16/2020	T. CROSS

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
N/C	INITIAL RELEASE	04-29-14	P.BRAVO
A	INCORPORATED ECN 04969	06-10-15	P.BRAVO
B	INCORPORATED ECN 05083	08-12-15	P.BRAVO



650.6510

		10	650.6519	THERMAL PORT PLUG	△	△
		9	650.6518	SHUTTLE HOUSING PLUG	△	△
		8	650.6517	SWIVEL FITTING PLUG	△	△
		7	650.6516	SAFETY DISC RETAINER PLUG	△	△
		6	650.6515	EXTENDED GAUGE ADAPTER	△	△
		5	650.6514	PLUG ADAPTER	△	△
		4	650.6513	THERMAL ADAPTER	△	△
		3	650.6512	GAUGE ADAPTER	△	△
		2	650.6511	FILL PORT ADAPTER	△	△
		1	650.6510	BURST DISC ADAPTER	△	△
		FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

QTY		PARTS LIST			
NEXT ASSY (S)		ORIGINAL DATE		04-20-2014	
650.5300		DRAWN BY	CHECKER		
		P BRAVO			
		DRAWING APPROVAL			
		P BRAVO			
		CONTRACT NO.			
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°			
		 3030 ENTERPRISE CT SUITE A VISTA, CA 92081 (760)-724-5300			
		PORT ADAPTERS			
REV	CAGE CODE	DWG. NO.	REV		
B	07M26	650.6500	PB		
SCALE		NONE	SHEET		1 OF 6

DART AEROSPACE
3030 ENTERPRISE CT., SUITE A
VISTA, CA 92081
(760)-724-5300

PORT ADAPTERS

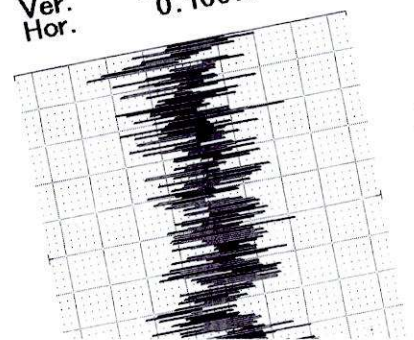
REV
P.B2

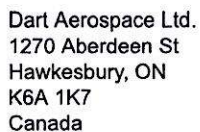
Mitutoyo
DATE 2000-02-17
TIME 19:44:00
STAND JIS2001
PROFILE R
FILTER GAUSS
EVA-L 0.5in
N 0.1in
 λ_c 320 μ in
 λ_s ALL
TILT-COMP. OFF
CURVE-CMP. 0.004in/s
M-SPEED 0.04in/s
R-SPEED ON
AUTO-RTN 32000 μ in
RANGE $\pm$ ESC
DRIVE ON
STYLUS ON
PRE/POST STAND ON

R-PROFILE
EVA-L 0.5in
 λ_c 0.1inX5
Ra 6.5 μ in
Rz 57 μ in
Rq 8.2 μ in

R-PROFILE
EVA-L 0.5in
 $\lambda_c=0.1inX5$
x 20K
x 10

Ver. 50.000 μ in/in
Hor. 0.100in /in





Tel (613) 632-5200

PURCHASE ORDER
POHB046807



Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Issued By: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Special Comments:

Plex 7/30/20 1:09 PM Dart.Guerin.Kimberley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046807



Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	211490	650.6513	650.6500 REV.PB2	Thermal Adapter -Issue P/O; PASSIVATE IAW QQ-P-35C, TYPE II -Material type; 303 stainless steel -Certificate of Conformity is required	Firmed X3	-	8/6/20	3 pcs	0 pcs	3 pcs	\$8.3333/pcs	\$25.00
4	211507	650.7910	650.7900 REV-PA1	Shroud -Issue P/O; PASSIVATE IAW QQ-P-35C, TYPE II -Material type; 303 stainless steel -Certificate of Conformity is required	Firmed X3	-	8/6/20	3 pcs	0 pcs	3 pcs	\$8.3333/pcs	\$25.00
5	210646	650.7710	650.7700 Rev.PF1	Electric Cap -Issue P/O; PASSIVATE IAW QQ-P-35C, TYPE II -Material type; 303 stainless steel -Certificate of Conformity is required	Firmed X2	-	8/6/20	2 pcs	0 pcs	2 pcs	\$8.3333/pcs	\$16.67
Grand Total:												\$100.00

Handwritten signature: K. Guerin



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046807



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

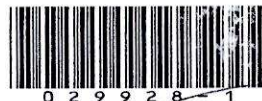
A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 7/30/20 1:09 PM Dart.Guerin.Kimberley



Certificat de Conformité / Certificate of Compliance



2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

029928 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
31-Jul-2020		Ian Wilson		POHB046807				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp. Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	654.6513 Rev.	654.6513 01 -PASSIVATION-NITRIC #4 [PASSIVATION NITRIC #4] QQ-P-35C, TYPE II	PASSIVATION CH	2	2	0	0	0
2	650.6515 Rev.	650.6515 01 -PASSIVATION-NITRIC #4 [PASSIVATION NITRIC #4] QQ-P-35C, TYPE II	PASSIVATION CH	2	2	0	0	0
3	650.6513 Rev.	650.6513 01 -PASSIVATION-NITRIC #4 [PASSIVATION NITRIC #4] QQ-P-35C, TYPE II	PASSIVATION CH	3	3	0	0	0
4	650-7910 Rev.	650-7910 01 -PASSIVATION-NITRIC #4 [PASSIVATION NITRIC #4] QQ-P-35C, TYPE II	PASSIVATION CH	3	3	0	0	0
5	650.7710 Rev.	650.7710 01 -PASSIVATION-NITRIC #4 [PASSIVATION NITRIC #4] QQ-P-35C, TYPE II	PASSIVATION CH	2	2	0	0	0

DAS
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9-89

RECEIVED
AUG 05 2020
DART AEROSPACE LTD.

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M303 R1.000
 DATE: JAN 24 2020

PO / BATCH NO.: POH3045541
S250215

MATERIAL CERT REC'D: YES
 QUANTITY RECEIVED: 36PT
 QUANTITY INSPECTED: 36PT
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.1.000
 THICKNESS RECEIVED: 0.1.000
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N ☐	
CORRECT FINISH	Y ☒ N ☐	
CORROSION	Y ☒ N ☐	
CORRECT GRAIN DIRECTION	Y ☒ N ☐	
CORRECT MATERIAL PER M-DRAWING	Y ☒ N ☐	ASTM A582 / AMS 5640
CORRECT THICKNESS	Y ☒ N ☐	
PHOTO REQUIRED	Y ☒ N ☐	
CORRECT REF # TO LINK CERT	Y ☒ N ☐	432071
CORRECT MATERIAL IDENTIFICATION	Y ☒ N ☐	
CORRECT M# ON THE MATERIAL	Y ☒ N ☐	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☐ N ☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☐ N ☒	

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 AUG 17 2020

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: _____	DAS 82 9-89	SIGNED OFF BY: _____
DATE: <u>JAN 24 2020</u>		DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Telefono 0444.868211 - Fax 0444.963838
Stab.: 36100 BOLZANO (Italia) - Via A. Volta, 4/37
Telefono 0471.924111 - Fax 0471.924497

CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

In conformità a: EN 10204 (2004), 3.1 / ISO 10474 (2013), 3.1

Certificato nr. MEST432174 / 2019 /
Prüfung/Test/Exam

Cliente / Besteller/Purchaser/Client

Stato di fornitura: Hot rolled - Annealed Cold Drawn
Lieferzustand
Delivery state
Etat de livraison

Produttore:
Hersteller/Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 903007442 Stock - Canada

Bestell
Your order
Commande

Tipo di Elaborazione: E+AOD
Erneuerungszustand
Melting process
Mode d'élaboration

Marchi di Fabbrica:
Zeichen des Liefermarktes
Trade marks
Sigles de l'usine productrice



Conferma ordine nr. EI19002981

Werk/Our Order/Ref. nr.

Qualità: 303HS
Werkstoff/Grade/Matériau

Punzone del Collaudatore:
Stampel des Werksachverständigen
Inspector's stamp/Person de l'essayeur

MR

Avviso di Spedizione: D-BZ19004707

Lieferantrag/Packing list/S.L.

Marca: MV188ZHS (MAXIVAL)
Markenbezeichnung
Brand / Marque

Punzonatura: 303HS
Kennzeichnung
Marking
Marquage

SPECIFICHE:

Anforderungen / Requirements / Exigences

Note:

Anforderungen / Notes / Notes

VSI 0303 HS A,CF

AISI 303

AMS 5840 V S30300 A

AMS 5840 V TYPE1 A

ASME SA320 2017 B8F (0)

ASTM A314 2015 S30300

ASTM A320 2017A B8F (1)

ASTM A320 2017

ASTM A562 2012 S30300 A (2)

MIL-S-882 B/1 303

QQ-S-764 B/2 303 A

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(0)Section II Part A 2017 EDITION Chemical analysis only.

(1)Chemical analysis only.

(2)Reapproved 2017

Tolleranza: ASTM A484-18A TABLE 7

Pos. nr.	Oggetto	Dimensioni - In	Lunghezza - In	Colata	Pezzi	Peso - LB	Lotto nr.
Pos. nr. Item nr. Nr. de poste	Oggetto Product description Description de produit	Dimensioni Dimensions Dimensions	Lunghezza Length Longueur	Colata Pouring Coulée	Pezzi Pieces Pièces	Peso Weight Poids	Lotto nr. Lot nr. Lote nr.
0010	Round	1,0000	146/ 146	432071	411	5.849	828910630

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf Lieferbereitem produkt / test a l'état de fourniture / Prueba sobre el material así como entregado

TEST	Proveita / Probes Spektrum/Profil Longitud - Sym. Basis Data, Circle Weld Data, Thickness Long. Data, Splice Data	Pos. Saggio Position Position	Snervimento Yield Stress Yield Stress Rp 0,2 % k.s.l.	Snervimento Yield Stress Yield Stress Limite elastic k.s.l.	Resistenza Tensile strength Tensile strength Resistenza a trazione k.s.l.	Allungamento Elongation Elongation Allongement k.s.l.	Strizione Reduction of area Reduction of area Striction k.s.l.	Resilienza Impact energy Impact energy Resilience k.s.l.	Durezza Hardness Hardness Dureza HB
Valori richiesti Requirements/Required values Valeurs requises		min max							140 255
A	12,5	68 L	72		101	42	56		244

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf Lieferbereitem produkt / Test a l'état de fourniture / Prueba sobre el material así como entregado

TEST	min	max
A Grain size for ASTM E112		7

Mechanical properties according to ASTM A370.

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata / Heat Schmelze/Coûle	min	0,030	0,20	1,50	17,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
max	0,060	1,00	2,00	19,00	0,00	1,00	10,00	0,100	0,32	0,4000	0,00	0,00	0,00	0,00	0,00	0,00	0,00
C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	Zr %							
432071	0,037	0,45	1,85	17,05	0,46	0,85	0,164	0,032	0,33	0,0012							

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D

Vicenza, 02/07/19 VCQ052 - MEST432174	Il collaudatore di stabilimento der Werksachverständige / Works Inspector / L'agent d'usine M. RIZZOTTO	Direzione Qualità Quality Management/Quality Management/Qualität R. BERTELLI	Direzione Prodotto Product Management/Product Management/Direction Produit P. MESSORI	Pagina 1 di 2
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37634



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Telefono 0444.988211 - Fax 0444.983838
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CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

In conformità a: EN 10204 (2004), 3.1 / ISO 10474 (2013), 3.1

Certificato nr. MEST432174 / 2019 /

Nach/According to/Wiebei

Prüfung/Testing/Essai

Cliente / Besteller/Drummeher/Klient

Stato di fornitura: Hot rolled - Annealed Cold Drawn

Produttore:

Hersteller/Usine productrice

Lieferzustand
Delivery state
Etat de livraison

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 803007442 Stock - Canada

Tipo di Elaborazione: E+AOD

Marchi di Fabbrica:

Zeichen des Lieferanten
Trade marks
Sigles de l'usine productrice



Bestell

Your order

Commande

Erschmelzungsart
Melting process
Méthode d'élaboration

Qualità:

303HS

Punzone del Collaudatore:

Stempel des Werksachverständigen
Inspector's stamp/Plaque de l'inspecteur

MR

Conferma ordine nr. E119002981

Werk/Our Customer's nr.

Werktüte/Grade/Nuance

Avviso di Spedizione: D-BZ19004707

Marca:

MV188ZHS (MAXIVAL)

Punzonatura: 303HS

Kennzeichnung
Marking
Marquage

Produced without class I-II Ozone depleting substances.
Solution heat treated free from continuous carbide network.
Micro and macro etch test : OK
Reduction ratio = 44,2 : 1
Annealing temperature : 1960° F for 1h/water.
Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste

Die gestellten Anforderungen sind in Anlage erfüllt
The material has been furnished in accordance with the requirements
Le matériel a été fourni conforme aux exigences

Controllo antimescolanza: OK

Vermischungsprüfung: spezifiziert/techn. durchgeführt
Antimixing testing performed: OK
Contrôle d'émulsion: fait: r.e.s.

Controllo visivo e dimensionale: soddisfa le esigenze

Beichtigung und Ausmessung: ohne Beanstandung
Visual inspection and dimension check: satisfactory
Contrôle visuel et dimensionnel: satisfaisant

Melted and manufactured in Italy

No welding or weld repair

Material free from Mercury contamination

We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

The Quality Management System is also Certified according Pressure Equipment Directive 2014/68/EU Annex 1, chapt. 4.3 by TÜV and LLOYD'S

Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction.

Maxival and/or Valplus grades/products are manufactured with ladle techniques to control composition, distribution, size and shape of non-metallic inclusions for improved machinability.

The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Valbruna SpA shall not be responsible for any improper use of the Products.

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D

Vicenza, 02/07/19 VCO052 - MEST432174	Il collaudatore di stabilimento der Werksachverständige / Works Inspector / L'agent d'usine M. RIZZOTTO	Direzione Qualità Qualitätsmanagement/Quality Management/Direction Qualité R. BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Product P. MESSORI	Pagina 2 di 2
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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **POHB045541**



Items													
Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4		M303R0.625			303 Round Bar 0.625" : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft	Firmed	-	1/24/20	24 ft	0 ft	24 ft	\$4.95/ft	\$118.80
5		M303R1.000		SR13	303 Round Bar 1.00 : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft	Firmed	-	1/24/20	36 ft	0 ft	36 ft	\$11.40/ft	\$410.40
6		M4130NB0.500X03.000			4130 Bar 0.500 X 3.00 : MATERIAL: AISI 4130N STEEL BAR PER MIL-S-6758 OR AMS 6345/6348/6370/6528 CUT TO SIZE 14" receive ft	Firmed	-	1/24/20	47 ft	0 ft	47 ft	\$30.57407/ft	\$1,436.98
Line Item Note 47 ft = to 40 pcs cut to 14"													
7		MSTEEL-A2-B0.500X1.250	MSTEEL-A2		AISI A2 Tool Steel Bar, 0.500 X 1.250 : MATERIAL: AISI A2 STEEL, ANNEALED CONDITION AS PER ASTM A681 receive ft	Firmed	-	1/24/20	48 ft	0 ft	48 ft	\$16.25/ft	\$780.00
												Grand Total:	\$4,048.38

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable). No Raw Metals from China or Soviet Bloc Countries. (DFARS)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program.

A049 supplier awareness.

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 1/10/20 12:50 PM Dart.Lavoie.Chantal

579 x 1.350 (L 7)
9'9" x 4"

L6
14" x 40

^XA^MCY^XZ^XA^SZ2~JSN^LT0^FO407,607^GB156,568;2^FS^FO420,873^AOR,29,30^FH_ ^FD_5F

Shipping Order

22/01/2020

METAUX SOLUTIONS INC
2625 BOUL JACQUES CARTIER EST
LONGUEUIL, QUEBEC
J4N 1L7 Tel.: 450 641-3330

Order : 149625
Reference : pohb045541
Ship : PICK UP / PICK UP

Customer: 6323336

Ship To

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
MR3441H	4140 HTSR ROU .750 DIA 1 x 22' ht:75070620	22	22	0
MR11841H	4140 HTSR ROU 1.125 DIA 1 x 20' r/l ***** ht:75072955	23.42	23.42	0
DT12083	MS TUB .500" X .083" WALL DOM 4 x 20' r/l ***** ht: mm18106467	81	81	0
SR583	303 ROU .625 DIA 2 x 12' r/l ht:462762	25	25	0
SR13	303 ROU 1.000 DIA 3 x 12' r/l ***** ht:432071	36	36	0
MP124130N	4130 NORM PLATE .500 THICK AMS 6345 40 x 3" x 14" ht:1961550	11.68	11.68	0
TP12A2	A-2 PLATE TFA 1/2" THICK 4 x 1.25" -0+ .0656" x 144" r/l ht:9919020379b-48-1	102	102	0
	livre jp			

DAS
82
9-89

JAN 23 2020

Shipping : _____
Package No : _____

Ref. : _____

Merchandise Received: _____

(1/2)

LIN 5
M303R1.000

H/T 432071
S250215

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 303 SS ROUND BAR
(NOTE: AISI 304/316 NOT ACCEPTABLE)

△ SPECIFICATION: ASTM A582

PART NUMBER: M303R D.DDD
DIA.

WHERE "D.DDD" = DIAMETER IN INCHES
EG. 0.75" ROUND BAR = M303R0.750

DAS
82
9-89

RELEASED
2010-02-02
MD

B	REFORMAT DWG, ADD SPECS (ZN D8-1), REF PAR 08-020A	CP	10.01.05
A	NEW ISSUE	DS	01.12.20
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN		DRAWING NO.	REV. B
CHECKED		M303R	SHEET 1 OF 1
MFG. APPR.		TITLE	SCALE
APPROVED		303 ROUND BAR	NTS
DE APPR.		COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR DISCLOSED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	10.01.05		